



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,782	06/13/2006	Daisuke Yamada	291916US2PCT	5032
22850	7590	11/17/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
JONES, ERIC W				
ART UNIT		PAPER NUMBER		
2892				
NOTIFICATION DATE		DELIVERY MODE		
11/17/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

### Office Action Summary

**Application No.**

10/582,782

**Applicant(s)**

YAMADA ET AL.

**Examiner**

ERIC W. JONES

**Art Unit**

2892

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 July 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 13 June 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/CDC)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al (US 2002/0060583 A1-prior art of record) in view of Tsutomu (JP 2000-206149 A – original and machine translation provided-prior art of record).

Re claim 1, Kimura et al disclose in FIG. 13 an anisotropically conductive connector (10; ¶ [0140]) configured to electrically connect a circuit board (20; ¶ [0140])

having an electrode (21; ¶ [0140]) for an inspection of a circuit device (1; ¶ [0140]), said electrode provided corresponding to an electrode (2; ¶ [0140]) to be inspected of the circuit device to be an inspection target.

Kimura et al fail to disclose the anisotropically conductive connector comprising: a lubricant layer provided on at least a surface on a side of the anisotropically conductive connector that comes in contact with the circuit device.

Tsutomu discloses an oil coating liquid applied to a probe tip used for testing electrical characteristics of a chip. (Abstract)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the coating liquid of Tsutomu with the connector of Kimura et al to produce a conventional probe card for electrical characteristics inspection of a chip with accuracy, without the electrode pad of the chip adhering to the tip of the probe or producing a fault due to oxidation of the probe. (page 2 of 9, ¶ [0006])

Re claim 3, Kimura et al disclose a method of inspecting a circuit device (1; ¶ [0140]) which serves to electrically connect an electrode (21; ¶ [0140]) to be inspected in a circuit device to be an inspection target to an inspection electrode (2; ¶ [0140]) of a circuit board (20; ¶ [0140]) with an anisotropically conductive connector (10; ¶ [0140]) interposed therebetween. (¶ [0140]-[0142])

Kimura et al fail to disclose applying a lubricant to at least a surface on a side of the anisotropically conductive connector that comes in contact with the circuit device and causing a surface on the inspected electrode of the circuit device to come in

contact with the surface of the anisotropically conductive connector to which the lubricant is applied.

Tsutomu discloses an oil coating liquid applied to a probe tip used for testing electrical characteristics of a chip. (Abstract)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the coating liquid of Tsutomu to the teachings of Kimura et al to produce a conventional probe card for electrical characteristics inspection of a chip with accuracy, without the electrode pad of the chip adhering to the tip of the probe or producing a fault due to oxidation of the probe. (page 2 of 9, ¶ [0006])

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura and Tsutomu as applied to claim 1 above, and further in view of Yamada et al (5,055,352-prior art of record).

Re claim 2, Kimura et al and Tsutomu fail to disclose the lubricant layer is a metal salt of alkyl sulfonic acid.

Yamada et al disclose lubricating agents of alkylsulfonic acids and metal salts thereof. (column 6, lines 7-17)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the the alkylsulfonic acids and metal salts of Yamada et al for the oil coating liquid of Tsutomu with and to use them with the method of Kimura et al and Tsutomu to prevent rust corrosion in produced components. (Yamada et al column 6, lines 8-10)

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura and Tsutomu as applied to claim 3 above, and further in view of Miyazaki (US 6,597,070 B2-prior art of record).

Re claim 4, Kimura et al and Tsutomu fail to disclose the electrode to be inspected in the circuit device to be the inspection target is a solder projected electrode.

Miyazaki discloses solder projecting electrodes (20 in FIG. 1E; column 7, line 67 - column 8, lines 1-2)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the solder projecting electrode of Miyazaki for the inspection electrode of Kimura et al since the examiner takes Official Notice of the equivalence of conductive electrodes and solder projecting electrodes in for their use in the device connection art and the selection of any one of these known equivalents to connect a device would be within the level of ordinary skill in the art. See MPEP § 2144.06.

7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura and Tsutomu as applied to claim 3 above, and further in view Yamada et al.

Re claims 5 and 6, Kimura et al and Tsutomu fails to disclose the lubricant is a metal salt of alkyl sulfonic acid.

Yamada et al disclose lubricating agents of alkylsulfonic acids and metal salts thereof. (column 6, lines 7-17)

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to substitute the alkylsulfonic acids and metal salts of Yamada et al for the oil coating liquid of Tsutomu and to use them with the method of Kimura et al and Tsutomu to prevent rust corrosion in produced components. (Yamada et al column 6, lines 8-10)

8. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura and Tsutomu as applied to claim 1 and 3 above, and further in view Nakaya et al (JP 55037317 A – original and machine translation provided).

Re claims 7 and 8, Kimura et al and Tsutomu fails to disclose the lubricant comprises a lubricant in a solid powder state at an ordinary temperature.

Nakaya et al disclose the lubricant comprises a lubricant in a solid powder state at an ordinary temperature (heat resistive resin powder as a solid lubricant; Abstract)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the solid powder state lubricant of Nakaya et al for the oil coating liquid of Tsutomu and to use it with the method of Kimura et al and Tsutomu to reduce wear of a heating element or a charging probe. (Nakaya et al Abstract)

#### ***Response to Arguments***

9. Applicant's arguments filed 7/18/2008 have been fully considered but they are not persuasive.

***1. Re Applicant argument 'the '149 publication is silent regarding any kind of an anisotropically conductive connector. Thus, the '149 publication is silent regarding any surface of an anisotropically conductive connector with a lubricant.'***

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986)

Further, the examiner respectfully submits that using the teaching of "149 publication" does not change the principle of operation of the primary reference or render the reference inoperable for its intended purpose, see MPEP § 2143.01, and it would have provided an improvement as discussed above.

**2. *Re Applicant argument 'a probe needle is not analogous to an anisotropically conducting connector sheet.'***

In response to applicant's arguments that a probe needle is not analogous to an anisotropically conducting connector sheet, the examiner takes the position that both the probe needle and an anisotropically conducting connector sheet can be used perform the function of device inspection. Thus, prior art is analogous and is in field of applicant's endeavor.

**3. *Re Applicant argument 'one skilled in the art would not be led to coat an entire surface of the anisotropically conductive connector with a lubricant.'***

In response to applicant's arguments one skilled in the art would not be led to coat an entire surface of the anisotropically conductive connector with a lubricant, the examiner takes the position that that limitation is not addressed in the claim language.



Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

**4. Re Applicant argument 'the '352 patent is directed to a ferromagnetic thin film magnetic recording medium, but in no way teaches or suggests an anisotropically conductive connector wherein a lubricant is applied to at least a surface on a side which comes in contact with a circuit device to be an inspection target.'**

The examiner submits the '352 patent is being offered for its use of the claimed lubricants and their obvious use to one of ordinary skill in the art since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987). See MPEP § 2106 and § 2111.04.

**5. Re Applicant argument 'the '070 patent is directed to a semiconductor device, including projecting electrode portions, but is silent regarding an anisotropically conductive connector.'**

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986)

Further, the examiner respectfully submits that using the teaching of "070 patent" does not change the principle of operation of the primary reference or render the reference inoperable for its intended purpose, see MPEP § 2143.01, and it would have provided an improvement as discussed above.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC W. JONES whose telephone number is (571)270-3416. The examiner can normally be reached on Monday-Friday 5:30AM-3:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thao X. Le can be reached on (571)272-1708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thao X Le/  
Supervisory Patent Examiner, Art  
Unit 2892

/ERIC W JONES/  
Examiner, Art Unit 2892  
11/7/2008